CUBIT Capability Proposal

Technical Area Geometry, Meshing, Infrastructure, GUI, Graphics, etc..	**Technical Lead** Cubit Developer in charge of technical area
Mesh Database / Infrastructure	Darryl

MRD Description
Describe the capability in terms of how a user would see it.

Better support for higher order nodes

SRS Description
What needs to be done by Cubit developers to implement this capability? Break the tasks into steps if applicable. (Steps should be on the order of 2 man-weeks or more)

We would like a coherent policy for the handling of higher order nodes, including how they are stored in the database, when they are available to algorithms or not, how long they should persist before and after exporting, etc.

1. Decide on policies, the philosophy we would like to guide us in our dealings with HO nodes.
2. Design SMD's treatment of HO nodes based on that philosophy.
3. Modify clients (algorithms) as needed.

Justification
Describe why this is important and what impact it will have if it is implemented. (or not implemented).

SMD has not yet established a policy for the handling of higher order nodes. We currently just piggy back off of the CubitNode database and don't really address the issue. We need to.
The current behavior works, and that's great. However, I've heard grumblings that it's too tacked on and isn't consistent. Since we have to handle higher order nodes in SMD eventually, we really ought to develop an overarching design for how to deal with them.

Resources Who will work on this	**Time estimate** How much time will it take in man-weeks	**Targeted Release** 10.2 (August 06), 10.3 (March 2007), 10.4 (August 2007), Future (beyond FY07)
Darryl / Clint / Karl / Others	16 weeks	10.3

Submitted By:	**Date:**
Darryl	3/29/06